future programming tastes of consumers, and so it is difficult to specify what programming and price should be in the future. It is true that a recent trend in the contracts between MDU owners and PCOs has been toward the inclusion of some contractual provisions, such as technological most-favored-nation-type clauses, that offer the MDU owner some protection (such a clause might say that the PCO must keep the technology in the building up to "prevailing standards" or the PCO's "current standards elsewhere in the MDU's market area"). But such provisions are likely to offer far from complete protection, and the attempt to include them seems to indicate, more than anything else, the importance of the issue.

27. A significant concern regarding future investments within an MDU involves the incentives for an MDU owner to allow, or even encourage, an inefficient over-build (or upgrade investment) by a second cable provider once a PCO has made an initial investment in a building. In the case of a new MDU where a PCO is the first provider to wire the MDU, this could involve bringing the local franchised cable operator into the MDU. Where the local cable franchise operator is already in the building, the issue may be the incentive for the franchise holder (possibly encouraged by the MDU owner) to upgrade its facilities.

28. Without an exclusive contract, there is nothing to prevent such over-building. However, such overbuilding may very well be inefficient. Moreover, the prospect of such overbuilding may make the PCO unwilling to invest in the MDU in the first place.

29. To illustrate these points, consider the following simple example. Suppose that there is a new MDU and that a PCO must invest 220 to serve this MDU. The local franchise operator on the other hand, needs to invest 50 to serve the building (its costs

may be lower because it need not install any reception equipment – its signal is already just outside the MDU). There are 300 residents in the building. Of these, 100 of them are happy to receive their service from either cable provider and have a value of 1 from cable service. The remaining 200 residents are only interested in the services of the PCO, and receive a value of 1 from these services. (This is a simple way of capturing the fact that the PCO is likely to be able to provide a higher value product, in part because its channel capacity may be greater, but more significantly because it can tailor the programming it offers in the MDU to the particular attributes of the MDU's residents.) If just the PCO serves the building, it will charge each resident 1 for cable service and earn 300 in subscriber fees. If just the franchised cable operator serves the building it will charge 1 for service and earn 100 in subscriber fees. Finally, we suppose that in the event that both the PCO and the franchise operator serve the building, then the PCO serves the 200 consumers who value only it, while the MSO serves the remaining residents (at a price of 1). Hence, in this event the PCO earns 200 in subscriber fees and the franchised cable operator earns 100 in subscriber fees.[8,9]

30. Note, first, that in this setting, the efficient outcome is for only the PCO to serve the building – aggregate surplus is 80 in this case (gross consumer value is 300, and investment costs are 220), while it is 50 if the building is served by only the cable franchise operator (gross consumer value of 100, less investment costs of 50), and it is 30 if both

[8] The same conclusions can follow whether or not firms start undercutting each other when they are both in the building. Although I will not go through such an example here, similar effects can arise: the MDU owner may encourage inefficient over-building, leading the PCO to lose money if it enters the building, and ultimately resulting in the PCO being unable to compete. In such cases, even though having both providers in the MDU would lower prices, lower prices never materialize when exclusives are banned.
[9] For simplicity, we assume that there is only one period of sales. Alternatively, we can view the stated valuations of residents as the present discounted values of their valuations.

cable providers serve the building (gross consumer value of 300, less investment costs of 270).[10]

31. Suppose that exclusive contracts are not allowed and that the PCO and MDU owner reach an agreement whereby the PCO invests to serve the building. Once the PCO has invested, the building owner and the cable franchise operator have an incentive to reach an agreement whereby the cable franchise operator invests in providing service to the MDU as well. By doing so, the cable operator will earn subscriber fees of 100, while incurring an investment cost of only 50. However, note three things. First, this decision is socially inefficient – allowing the MSO into the building creates no additional consumer benefits here, but incurs an investment cost of 50. The reason that it pays for the cable operator to enter the building (or upgrade) is that in doing so he steals some of the PCO's business.[11] Second, if the MDU owner will allow the cable franchise operator into the building once the PCO has invested, the PCO will lose money: he will invest 220, but earn only 200. Third, the end result of this will be that the PCO will not be willing to invest at all – the MDU will be forced to contract with the MSO, yielding a socially inefficient outcome.

32. One might wonder about alternative arrangements to exclusive contracts that could be used to circumvent these problems. One possibility is that MDUs could write

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[10] I am ignoring any costs of programming acquisition here, but we can equally well think of the residents' valuations as net of these costs.

[11] For more general discussions of this type of inefficiency and the role of exclusivity in limiting it, see I. Segal and M.D. Whinston, "Exclusive Dealing and Protection of Investments," 1997, mimeo; a similar point arises in the literature on free entry and social ineffiicicency, such as N.G. Mankiw and M.D. Whinston, "Free Entry and Social Inefficiency," *Rand Journal of Economics*, Spring 1986, 48-58. Note that if prices were bid down for cable service due to the cable operator's entry/upgrading then it would still be true that the cable operator and the MDU owner might *jointly* find it optimal to facilitate this entry given that the MDU owner internalizes the reduction in residents' cable expenses that this entry would

bulk contracts with PCOs, thereby assuring them business without writing an exclusive contract. In fact, bulk contracts are written in the marketplace, particularly with condominium and cooperative associations. However, from the standpoint of an MDU owner, such contracts have the risk of being inefficient if not every tenant will want and value cable service. Moreover, long-term quantity contracts involve a similar potential for anticompetitive effects. Alternatively, an MDU owner could subsidize a PCO's investment in its building to reduce the PCO's exposure to an acceptable level. There are two problems with this idea. The first is that it actually does not have any effect on the MDU owner's incentive to allow inefficient over-building (i.e. the incentives in the above example would not change if the MDU owner had subsidized the PCO's initial investment). Second, the MDU may see little or no direct benefit from encouraging the PCO to come into the building (i.e. in the above example, the MDU owner sees no benefit given that he will be allowing the cable franchise operator into the building anyway.) Finally, one mechanism that can curb the MDU owner's incentives for inefficient over-building is for the MDU owner to receive a large share of the PCO's subscriber revenues (this works because the cable franchise operator is now taking some of the MDU owner's revenue stream when it enters the building.) In fact, MDU owners do often receive a share of the PCO's subscription revenue stream. However, this share is typically quite small (on the order of 5-10%); too small to really matter for the MDU owners incentives regarding over-building in any significant way. Morever, this share cannot be significantly increased without greatly diminishing the incentives of the PCO to invest in keeping service quality high.

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bring. For more on this point, see R. Innes and R.J. Sexton, "Strategic Buyers and Exclusionary

33. In fact, both PCOs and MDU owners seem to be in universal agreement that exclusives are necessary to create an environment in which PCOs are willing to invest in MDUs. Indeed, the comments submitted to the FCC by the Building Owners and Managers Association remarked that "Without the right to enter into exclusive contracts, many building owners would be forced to deal with the incumbent cable operator and no one else." (p. 4) My interviews with MDU owners revealed similar sentiments.

34. Some evidence of the importance of these concerns can be seen by considering the effect that state mandatory access statutes have had on the level of competition in delivery of video programming to MDUs. These statutes mandate that the local franchised cable operator has a right of access in an MDU, and thereby make exclusive contracts with competitors to the franchised cable operator impossible.[12] Anectodal evidence suggests that PCOs are much less likely to be active in states that have such statutes. Moreover, the responses to the ICTA survey confirm this anecdotal evidence: survey respondents were active in 28 of the 36 non-access states (77%), but in only 5 of the 14 access states (36%). Thus, the inability to write exclusive contracts in access states is associated with a significant reduction in the extent of PCO competition that franchised cable operators face.

Contracts," *American Economic Review*, June 1994, 566-84.

[12] The presence of these statutes is not exactly equivalent to a ban on exclusive dealing contracts because they also mean that an MDU owner cannot bar the local franchised cable operator from access to its building. But such a difference is unlikely to be of significant relevance in practice, because the difference only matters for the incidence of inefficient over-building in cases in which the franchised cable operator can earn positive profits by entering the MDU or upgrading its service to the MDU following investment by a PCO, but the building owner is made worse off by this entry. The typical case is likely to be that the building owner is at worst indifferent about this entry.

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ACADEMIC EMPLOYMENT

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VISITING POSITIONS

Department of Economics, Northwestern University, 1997-8
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GRANTS, FELLOWSHIPS, PRIZES

National Science Foundation Research Grants, 1986-88, 1990-94
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Co-Editor, *RAND Journal of Economics*, 1991-1996
Research Associate, National Bureau of Economic Research
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CONSULTING EXPERIENCE

I have been the principal economic consultant in the following matters:

Starkist/Bumble Bee Merger Investigation (Dept. of Justice Merger Investigation)
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TEACHING

Graduate industrial organization, antitrust, and regulation
Graduate microeconomic theory
Undergraduate industrial organization and antitrust
Undergraduate applied microeconomics

PUBLICATIONS: BOOKS

1. *Microeconomic Theory*, Oxford University Press, 1995, 981 pp. (with A. Mas-Colell and J. Green)

PUBLICATIONS: JOURNAL ARTICLES

1. "Moral Hazard, Adverse Selection, and the Optimal Provision of Public Goods," *Journal of Public Economics* (22), October 1983, pp. 49-71.

2. "Common Marketing Agency as a Device for Facilitating Collusion," *RAND Journal of Economics* (16), Summer 1985, pp. 269-81. (with B.D. Bernheim)

3. "Menu Auctions, Resource Allocation, and Economic Influence," *Quarterly Journal of Economics* (101), February 1986, pp. 1-31. (with B.D. Bernheim)

4. "Free Entry and Social Inefficiency," *RAND Journal of Economics* (17), Spring 1986, pp. 48-58. (with N.G. Mankiw)

5. "Common Agency," *Econometrica* (54), July 1986, pp. 923-42. (with B.D. Bernheim)

6. "Coalition-Proof Nash Equilibria I: Concepts," *Journal of Economic Theory* (42), June 1987, pp. 1-12. (with B.D. Bernheim and B. Peleg)

7. "Coalition-Proof Nash Equilibria II: Applications," *Journal of Economic Theory* (42), June 1987, pp. 13-29. (with B.D. Bernheim)

8. "Exit with Multiplant Firms," *RAND Journal of Economics* (19), Winter 1988, pp. 568-88.

9. "Multiproduct Monopoly, Commodity Bundling, and Correlation of Values," *Quarterly Journal of Economics* (104), May 1989, pp. 371-84. (with R.P. McAfee and J. McMillan)

10. "Multimarket Contact and Collusive Behavior," *RAND Journal of Economics* (21), Spring 1990, pp. 1-26. (with B.D. Bernheim)

11. "Tying, Foreclosure, and Exclusion," *American Economic Review* (80), September 1990, pp. 1-26.

12. "The 'Foreclosure' Effects of Vertical Mergers," *Journal of Institutional and Theoretical Economics* (147), March 1991, pp. 207-26. (with P. Bolton)

13. "Patent Expiration, Entry, and Competition in the U.S. Pharmaceutical Industry: An Exploratory Analysis," *Brookings Papers on Economic Activity, Microeconomics*, 1991, pp. 1-48. (with R. Caves and M. Hurwitz)

14. "Entry and Competitive Structure in Deregulated Airline Markets: An Event Study Analysis of People Express, *RAND Journal of Economics* (23), Winter 1993, 445-62. (with S. Collins)

15. "Incomplete Contracts, Vertical Integration, and Supply Assurance," *Review of Economics Studies* (60), January 1993, pp. 121-48. (with P. Bolton)

16. "On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry Barriers, Reliance, and Renegotiation," *RAND Journal of Economics* (26), Summer 1995, pp. 180-202. (with K. Spier)

17. "Exclusive Dealing," *Journal of Political Economy* (106), February 1998, 64-103. (with B.D. Bernheim)

18. "Incomplete Contracts and Strategic Ambiguity," forthcoming in the *American Economic Review*. (with B.D. Bernheim)

PUBLICATIONS: OTHER

1. "The Ethyl Corporation in 1979," *Harvard Business School Case Study No. N9-388-075.*

WORKING PAPERS

"Naked Exclusion and Buyer Coordination," H.I.E.R. Disc. Paper # 1780. (with I. Segal)

"Exclusive Dealing and Protection of Investments," mimeo. (with I. Segal)

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